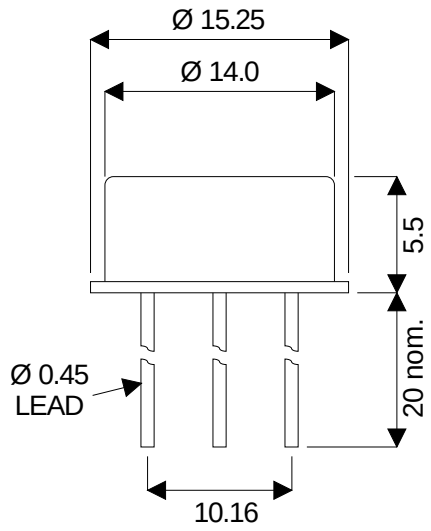
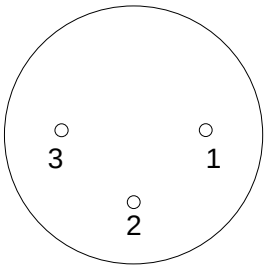
查询SMP1000G-KQ供应商

SMP1000G-KQ

P.I.N. PHOTODIODE

MECHANICAL DATA
Dimensions in mm.





TO-8

Pin 1 – Anode Pin 2 – Cathode Pin 3 – Case

FEATURES

- **HIGH SENSITIVITY**
- **WIDEST SPECTRAL RESPONSE**
- **ENHANCED UV SENSITIVITY**
- **PHOTODIODE ISOLATED FROM PACKAGE**
- **EXCELLENT LINEARITY**
- **LOW NOISE**
- **INTEGRAL OPTICAL FILTER OPTION note 1**
- **TO8 HERMETIC METAL CAN PACKAGE**
- **EMI SCREENING MESH AVAILABLE**

Note 1 Contact Semelab Plc for filter options

DESCRIPTION

The SMP1000G-KQ is a Silicon P.I.N. photodiode incorporated in a hermetic metal can package. The package window has greater ultra-violet light transmission, thus extending the useful spectral range of the device. The electrical terminations are via two leads of diameter 0.018" on pitch centre diameter of 0.2". The photodiode is electrically isolated from the package, which has a separate earth lead.

The larger photodiode active area provides greater sensitivity than the SMP900 range of devices, with a corresponding reduction in speed. The photodiode structure has been optimised for high sensitivity, light measurement applications across the infra-red to ultra-violet spectrum. Inclusion of a suitable optical filter into the package can produce a device that responds only to ultra-violet light. The metal can, isolated photodiode and optional screening mesh ensure a rugged device with a high degree of immunity to conducted and radiated electrical interference.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

Operating temperature range	-40°C to +70°C
Storage temperature range	-45°C to +80°C
Temperature coefficient of responsively	0.35% per °C
Temperature coefficient of dark current	x2 per 8°C rise
Reverse breakdown voltage	60V

SMP1000G-KQ

CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsively	λ at 900nm	0.45	0.55		A/W
Active Area			76.85		mm^2
Dark Current	E = 0 Dark 1V Reverse		8	9	nA
	E = 0 Dark 10V Reverse		16	38	
Breakdown Voltage	E = 0 Dark 10µA Reverse	60	80		V
Capacitance	E = 0 Dark 0V Reverse		800	735	pF
	E = 0 Dark 20V Reverse		150		
Rise Time	30V Reverse 50Ω		16		ns
NEP	900nm		$28x10^{-14}$	0.45	W/√Hz